Amendments to the Claims: This listing of claims will replace all prior versions, and listings, of claims in the application

Listing of Claims:

1. (Currently Amended) A multiple aperture imaging system~~,~~ comprising:

a) an array of lens elements for capturing light and reducing a diameter of exiting light bundles, wherein the exiting light bundles exit from the array of lens elements;

b) ~~a~~ means for correcting optical phase of the exiting light bundles;

c) ~~a~~ means for reducing a total area of the exiting light bundles; and

d) means for combining all the exiting light bundles from the array of lens elements to form an image with resolution comparable to a single lens element having an equivalent aperture size respective to the array of lens elements,

wherein means for reducing the total area of the exiting light bundles includes first and second sets of reflective optical flats, arranged sequentially in space between the array of lens elements and the image, for sequentially compacting the exiting light bundles, initially in a first direction only and next in a second direction only, the second direction perpendicular to the first direction.

2. (Original) The multiple aperture imaging system claimed in claim 1, wherein the array of lens elements are arranged in a rectangular geometry.

3. (Original) The multiple aperture imaging system claimed in claim 1, wherein the means for reducing the total area of the exiting light bundles from the array of lens elements shifts placement of the exiting light bundles in a predetermined direction.

4. (Original) The multiple aperture imaging system claimed in claim 3, wherein the predetermined direction is selected from the group consisting of vertical, horizontal, diagonal, and radial.

5. (Original) The multiple aperture imaging system claimed in claim 4, wherein the means for reducing the total area of the exiting light bundles from the array of lens elements shifts the placement of the exiting light bundles both horizontally and vertically.

6. (Original) The multiple aperture imaging system claimed in claim 4, wherein the means for reducing the total area of the exiting light bundles from the array of lens elements shifts the placement of the exiting light bundles either horizontally or vertically.

7. (Original) The multiple aperture imaging system claimed in claim 1, wherein the array of lens elements are separated to create a sparse aperture.

8. (Currently Amended) The multiple aperture imaging system claimed in claim 1, wherein ~~the~~ telescopes are used as lens elements.

9. (Currently Amended) The multiple aperture imaging system claimed in claim 1, wherein a plurality of mirrors are used instead of the array of lens elements. ~~lacks antecedent~~

10. (Currently Amended) The multiple aperture imaging system claimed in claim 1, further comprising:

~~a1)~~ an imaging sensor ~~lacks antecedent is~~ selected from the group consisting of an array of imaging capture elements, photographic film, charge-coupled devices, CMOS devices, and a spectrometer.

11. (Original) The multiple aperture imaging system claimed in claim 1, wherein the imaging system is foldable.

12. (Currently Amended) A method for forming an image with resolution equivalent to an array of lens elements, comprising the steps of:

a) capturing light with the array of lens elements;

b) directing the light exiting the array of lens elements into a plurality of exiting light bundles;

c) reducing the plurality of exiting light bundles' diameters;

d) correcting optical phase for the plurality of exiting light bundles;

e) reducing the plurality of exiting light bundles' geometrical area; and

f) combining each of the plurality of exiting light bundles from the array of lens elements to form an image with resolution comparable to a single lens element having an equivalent aperture size respective to the array of lens elements;

wherein step (e) includes

arranging, in spatial sequence, first and second sets of reflective optical flats, and

first compacting the exiting light bundles in a first direction only, using the first set, and

next compacting the exiting light bundles in a second direction only, using the second set, the second direction perpendicular to the first direction.

13. (Original) The method claimed in claim 12, wherein the array of lens elements is arranged in a rectangular geometry.

14. (Currently Amended) The method claimed in claim 12, wherein ~~the means for~~ reducing ~~the~~ an area of the exiting light bundles from the array of lens elements shifts placement of the exiting light bundles in a predetermined direction.

15. (Original) The method claimed in claim 14, wherein the predetermined direction is selected from the group consisting of vertical, horizontal, diagonal, and radial.

16. (Currently Amended) The method claimed in claim 15, wherein ~~the means for~~ reducing the area of the exiting light bundles from the array of lens elements shifts the placement of the exiting light bundles both horizontally and vertically.

17. (Currently Amended) The method claimed in claim 15, wherein ~~the means for~~ reducing the area of the exiting light bundles from the array of lens elements shifts the placement of the exiting light bundles either horizontally or vertically.

18. (Original) The method claimed in claim 12, wherein the lens elements are separated to create a sparse aperture.